

What is Claimed Is:

1. A clutch between an internal combustion engine and a transmission, which are incorporated in a motor vehicle, the clutch comprising driving disks and transmission disks, wherein the driving disks and the transmission disks, at least in a region of friction sections (RaI, RaII, RaIII, RaIV, RaV, RaVI, RaVII and RaVIII) are formed in such a manner, that the friction sections are largely shudder insensitive.
2. The clutch according to claim 1, wherein the driving disks and the transmission disks, at least in the region of the friction sections (RaI, RaII, RaIII, RaIV, RaV, RaVI, RaVII and RaVIII) are provided with materials, through which a decreasing coefficient of friction (Rw) results.
3. The clutch according to claim 2, wherein the materials of the driving disks and the transmission disks have, on the one hand, high-end wear resistance as well as speed stability and, on the other, a high coefficient of friction and high thermal stability.
4. The clutch according to claim 1, wherein the friction sections (RaII, RaIII, RaVI, and RaVII) of the transmission disks comprise a ceramic with a fiber fabric.

5. The clutch according to claim 2, wherein the friction sections (RaII, RaIII, RaVI, and RaVII) of the transmission disks comprise a ceramic with a fiber fabric.

6. The clutch according to claim 3, wherein the friction sections (RaII, RaIII, RaVI, and RaVII) of the transmission disks comprise a ceramic with a fiber fabric.

7. The clutch according to claim 4, wherein the fiber fabric has a multi-directional structure.

8. The clutch according to claim 4, wherein the ceramic is provided with reinforcing fibers, which have an average length of at least 50 mm.

9. The clutch according to claim 3, wherein the friction sections (RaI, RaV, and RaVIII) of the driving disks comprise a sintered, organically bound material.

10. The clutch according to claim 9, wherein the sintered, organically bound material comprises metallic and nonmetallic components of brass, iron, copper, aluminum, a silicon-rich phase, a sulfur-rich phase, carbon and a phenolic resin binder.

11. The clutch according to claim 10, wherein the components of the sintered, organically bound material are distributed as:

Brass	Approximately 14 to 16% by volume,
Iron	Approximately 18 to 20% by volume,
Copper	Approximately 3 to 6% by volume,
Aluminum	Approximately 5 to 8% by volume,
Silicon-rich phase	Approximately 1 to 3% by volume,
Sulfur-rich phase	Approximately 3 to 4% by volume,
Carbon	Approximately 28 to 30% by volume, and
Phenolic resin binder	Remainder

12. A clutch between an internal combustion engine and a transmission, the clutch being built into a motor vehicle and comprising driving disks and transmission disks, characterized by the following distinguishing features:

the driving disks and the transmission disks, at least in a region of friction sections (RaI, RaII, RaIII, RaIV, RaV, RaVI, RaVII and RaVIII), are constructed in such a manner, that the friction sections are largely shudder insensitive,

the driving disks and the transmission disks, at least in the region of the friction sections (RaI, RaII, RaIII, RaIV, RaV, RaVI, RaVII and RaVIII) are provided with materials, by way of which a decreasing coefficient of friction results,

the materials of the driving disks and the transmission disks have a high wear resistance and speed stability and a high coefficient of friction and a high stability,

the friction sections (RaII, RaIII, RaVI and RaVII) of the transmission disks of a ceramic with a fiber fabric, and

the friction sections (RaI, RaIV, RaV and RaVIII) of the driving disks comprise a sintered, organically bound material.

13. The clutch according to claim 12, wherein the fiber fabric has a multi-directional structure.

14. The clutch according to claim 12, wherein the ceramic is provided with reinforcing fibers, which have an average length of at least 50 mm.

15. A multi-disc clutch comprising driving disks and transmission disks each having friction sections, wherein material of at least the friction sections exhibits a coefficient of friction of decreasing tendency.

16. The clutch according to claim 15, wherein the coefficient of friction of the material of at least the friction sections decreases as a driving speed and a driver speed coverage.

17. The clutch according to claim 15, wherein the material is a ceramic with a fiber fabric for at least the friction sections of the transmission disks.

18. The clutch according to claim 15, wherein the material is a sintered organically bound material for at least the friction sections of the driving disks.

19. A clutch comprising driving disks and transmission disks wherein a material of at least friction sections of the driving or the transmission disks comprises a sintered, organically bound material comprising:

Brass of approximately 14 to 16% by volume,

Iron of approximately 18 to 20% by volume,

Copper of approximately 3 to 6% by volume,

Aluminum of approximately 5 to 8% by volume,

Silicon-rich phase of approximately 1 to 3% by volume,

Sulfur-rich phase of approximately 3 to 4% by volume,

Carbon of approximately 28 to 30% by volume, and

Phenolic resin binder